REMARKS

Claims 1-26 are presently pending.

Claims 1-26 stand rejected under 35 U.S.C. § 112, first paragraph. The claims have been amended to address this rejection.

Claims 1, 2, 7, 8, 12-15 and 18-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,055,088 to Cradduck et al. in view of U.S. Patent No. 2,920,884 to Rowland et al. The applicant respectfully submits that claims 1, 2, 7, 8, 12-15 and 18-24 are allowable over Cradduck in view of Rowland.

The Office action recognizes that "Cradduck et al does not disclose a friction surface provided between the contact surfaces of the adjacent blade springs and selected to increase the coefficient of friction between the adjacent blade springs relative to the coefficient of friction between the opposing surfaces of the adjacent blade springs without the friction surface." (Office action, p. 3.) The Office action asserts that Rowland discloses the use of an insert which is a "friction surface" between adjacent blade springs to increase the coefficient of friction between the springs. (Office action, p. 3.) However, Rowland expressly states that its insert produces a "rolling or bearing action" that "eliminates considerable of the friction and lag of the spring in recovering from a displaced position." (Col. 4, ll. 30-33.) Thus, Rowland teaches away from the use of friction surfaces that increase sliding resistance between adjacent blade springs. Indeed, Roland does not suggest that its insert provides any increase in damping of vibrations.

Moreover, Rowland is directed to an entirely different use and thus is not properly combinable with Cradduck, and no motivation is provided in the Office action for their proposed combination. As discussed in the previous Amendment, Rowland teaches away from the claimed invention. Rowland discloses the use of a liner insert to decrease the coefficient of friction between adjacent plates and the insert as compared to the coefficient of friction between adjacent plates and conventional liners. As explained in Rowland, the purpose of the insert was to replace lubricants and other inserts that also decrease the coefficient of friction between the spring plates and the liners. (See Col. 1, ll. 15-47 and 57-63.) This is shown in the graph of Figure 8 of Rowland, where the plate springs with the inserts are shown to provide decreased resistance as compared to those with conventional liners. Thus, Rowland teaches that friction between leaf spring plates is undesirable and should be eliminated.

Furthermore, nowhere in the Office action is any motivation for the proposed combination of Cradduck with Rowland discussed. See In re San Su Lee, 277 F.3d 1338, 1343-44, 61 USPQ2d 1430 (Fed. Cir. 2002) ("The examiner's conclusory statements...do not adequately address the issue of motivation to combine. This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to '[use] what the inventor taguht against its teacher.'").

Motivation is not found in either Cradduck or Rowland for their proposed combination, and, indeed, their disclosures teach away from the proposed combination.

First, Rowland is directed to spring plates for vehicle wheels, an entirely different type of spring that disclosed in Cradduck for use with its tensioner. Second, the insert of Rowland is used to prevent frictional sliding between the springs, which is the opposite of the frictional engagement of the blade springs of Cradduck.

In addition, Rowland also is directed to preventing frictional sliding between its spring plates, which is the opposite springs of Cradduck. With the Roland liners: "[r]ubbing action is materially reduced or largely eliminated through use of the present design which is slotted and formed to bridge the space between adjacent plates and which bends or rocks as the plates move parallel to one another rather than act always in shear to rub or slide one or both of the plates." (Co1. 1, ll. 62-67.) Roland further discloses that, with its liner insert, "[t]here is no sliding action involved except perhaps in extreme positions of displacement of the spring leaves." (Col. 2, ll. 3-7 (emphasis added).) In contrast, Cradduck discloses that sliding between blade springs is permitted and can even be desirable: "An additional benefit of the utilization of multiple blade springs [21 and 22] is an improvement in natural damping characteristics...As the chain tensioner apparatus [10] flexes, the friction between all mating surfaces will provide damping to the system.

The Office action states that "the insert provided prevents the first (top) spring from sliding relative to the insert." (Office action, p. 7.) However, it is respectfully submitted that Rowland explicitly discloses that its insert does not slide relative to the second (bottom) spring. The insert is prevented from sliding relative to the adjacent spring 24 by the pair of cylindrical anchoring buttons or bosses 32 which protrude

through a like number of anchoring openings 34 formed in the spring 24. (Col. 2, ll. 68-72.) Rowland further discloses that sliding is undesirable, even at extreme displacements, and thus is opposite to the friction damping of Cradduck.

Given that the purpose of the insert of Rowland is inconsistent to that of the Cradduck tensioner, it is submitted that the combination of Cradduck and Rowland does not disclose or suggest Applicant's claimed tensioners and springs.

With respect to claim 2 (and by dependency claim 8), Rowland does not disclose a friction surface that is provided independently from the blade springs. Just the opposite, Rowland discloses that its insert 28 has cylindrical anchoring buttons or bosses 32 which protrude through anchoring openings 34 formed in the spring 24. "The buttons and complementary openings 32, 34 prevent longitudinal or lateral shift of the flat faced surface 36 of the base 30 relative to the opposing flat metallic surface of the spring leaf 18." (Col. 3, ll. 1-4.) Thus, the insert 28 of Rowland is not provided independently from the springs. With respect to claim 3 (and by dependency claim 9), Rowland does not disclose a friction surface attached to at least one of the blade springs through bonding or welding. As discussed above, the insert 28 of Rowland has buttons that extend through openings in the spring to prevent movement between the insert and the spring.

With respect to claim 13, Rowland does not disclose a friction surface formed on at least one of the springs. Instead, Rowland discloses the use of a separate insert 28 which is inserted between the springs. Thus, the insert 28 of Rowland is not formed on one of the springs.

Similarly, with respect to claim 22, Rowland does not disclose forming a friction surface on the contact surface of at least one of the adjacent blade springs. Rowland discloses the use of a separate insert 28 which is inserted between the springs. Thus, the insert 28 of Rowland is not formed on one of the springs.

Claims 4-6, 10, 11, 16-20, 25 and 26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cradduck in view of Rowland and further in view of U.S. Patent No. 5,691,037 to McCutcheon et al. The Applicant respectfully transverses the rejection, and submits that claims 4-6, 10, 11, 16-20, 25 and 26 are not unpatentable over Cradduck in view of Rowland and in further view of McCutcheon, given the discussion of Cradduck and Rowland, above, and the below discussion of McCutcheon.

As noted above, the Office action acknowledges that Craddock does not disclose the friction surface(s) set forth in those pending claims (Applicant submits that there are additional grounds for distinguishing Craddock as well). Applicant respectfully submits that the claimed tensioner and springs further is not suggested by McCutcheon and that McCutcheon cannot be properly combined with Craddock and Rowland as asserted in the Office action.

As discussed in the previous Amendments, McCutcheon is directed to an entirely different purpose, incorporating a viscoelastic material into laminates that is intended to absorb sound and other vibrations in non-sliding planar surfaces. Unlike the claimed tensioner, the McCutcheon laminate relies entirely on compression and deformation of its viscoelastic-laminate structure to provide its vibrational damping. (See cols. 5-6.) The passages from McCutcheon and Figure 3D cited in the Office action do not suggest

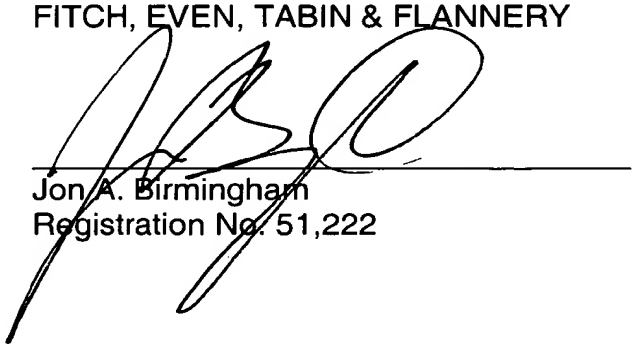
or disclose structures providing for a frictional sliding engagement between blade springs such as those claimed by Applicant. Given the different damping approach used by McCutcheon, there certainly is no motivation or suggestion to combine McCutcheon with Craddock and Rowland respect to any of the pending claims. Moreover, none of the references suggest that, if combined with Craddock and Rowland, McCutcheon would provide an operable tensioner capable of damping vibrations through the sliding action of spring surfaces.

Moreover, there certainly is no motivation for the combination of McCutcheon with both Cradduck and Rowland is identified by the Office action, and, as discussed above, none exists. The differences between McCutcheon, Cradduck and Rowland also render their proposed combination incapable of resulting in the claimed springs and tensions.

For the reasons stated above, Applicant respectfully submits that the application is in condition for allowance. Applicant also requests that any fees which may be required are charged Deposit Account No. 06-1135.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY



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